

## **REMARKS**

Applicant traverses the Examiner's rejection of claims 1-15 under 35 USC 103(a) as unpatentable over Pruitt U.S. Patent Number 2,988,441 in view of Garrett U.S. Patent Number 5,617,672. Applicant also traverses the Examiner's rejection of claims 16-23 which have been rejected under 35 USC 103(a) as unpatentable over US Rubinate/Suprasec in view of Pruitt '441.

The Garrett '672 reference while directed toward a soil additive using a foam having a bulk density of approximately 1 pound per cubic foot can be dismissed in its entirety as it is directed to ureaformaldehyde foam. It is readily understood by one of ordinary skill in the art that ureaformaldehyde foam is made from reacting formaldehyde and urea and is totally different in composition and structure in relation to the unique polyurethane foam of the present invention. Garrett also does not show any CEC for the material relying upon the organic composition of the mixture. It should be noted that Ureaformaldehyde foam has a residue (ppm) of formaldehyde remaining in the foam material. The examples only show the use of finely ground ureaformaldehyde foam as a filler with organic materials.

The Pruitt '441 reference is directed towards a medium for the growth and propagation of potted plants using polyurethane, rubber and vinyl resins having added synthetic ion exchange resins to produce an open celled foam.

It would not be obvious to one of ordinary skill in the art at the time of the invention to modify the medium of Pruitt '441 by eliminating the filler because unfilled polyurethane foam is not hydrophilic nor does it have a CEC of from 1.0 to 1.5. To overcome an inherently poor CEC, Pruitt adds a synthetic ion exchange resin (col. 13, lns. 57-75) and adds an inert compound having a high water-holding capacity to render the matrix hydrophilic (See example 1). In the present invention

it was unexpected that the invented formula would produce a hydrophilic foam with a CEC of from 1.0 to 1.5. As previously noted, Pruitt '441 is directed toward filled foams. Sterility is not inherent to filled foams nor is there any mention of sterility in Pruitt '441. Since the present invention does not introduce any fillers to the matrix, there is less possibility to contaminate the matrix and render it un-sterile. Sterile materials conform to Agricultural requirements thus making it easier to ship materials across national borders.

One of ordinary skill in the art would realize that polyurethane foam cannot be made without an isocyanate being one of the ingredients. The present invention uses a unique unfilled polyurethane foam with unexpected properties that support plant growth.

The invention of Pruitt is based on the additions of ion exchange additives. It is not obvious to one of ordinary skill in the art that polymeric diphenylmethane diisocyanate would impart the unique properties to the unfilled foam of the present invention.

As to Claim 2, Pruitt does not disclose the CEC at 1.25 and Garrett only refers to ground ureaformaldehyde foam.

As to Claim 6, Garrett refers to ureaformaldehyde foam and Pruitt (col. 7, lines 43-73) only refers to the pH of filled foams.

As to Claim 7, Garrett can be dismissed for only referring to ureaformaldehyde foam and Pruitt refers only to filled foams. It may be obvious to one of ordinary skill in the art that air water ratios can be altered with the addition of fillers, but it is not obvious how to obtain air water ratios without the use of fillers.

The claim of pore size and porosity is a further description of the unique unfilled foam with unexpected properties.

As to Claims 16, 17, 19, 20 through 23, Rubinate/Suprasec is only a list of isocyanates supplied by Huntsman and does not disclose a sterile foam. Although Pruitt discloses 4,4'-methylenebis(phenyl isocyanate), it is obvious to one of ordinary skill in the art that the use of this material in his invention of filled polyurethane foam would not produce a foam matrix with the unexpected unique properties of the present invention of a non-filled foam. Pruitt '441 does not disclose a CEC ranging from 1.0 to 1.5.

Pruitt (US 2,988,441 & US 3,373,009), Garrett (US 5,617,672), Wood (US 4,241,537) and Hann (EP 1191852 A2) disclose in the prior art various growth media of foams, in which all of the prior art, use filler in the growth media because un-filled polyurethane foam was not believed to be a suitable growth media. It was unexpected to discover that the un-filled polyurethane foam of the present invention has the required properties of a suitable growth media.

In respect to the obvious 35 USC 103(a) rejection, as noted by the Court in the case of *In re Gordon*, the mere fact that a prior art reference could be modified to achieve the claimed invention does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir.1984); see also *In re Laskowski*, 871 F.2d 115, 117, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989), and *Ex parte Levengood*, 28 U.S.P.Q.2d 1300, 1302 (Bd. Pat. App. & Int. 1993). Applicants respectfully submit that nowhere in the art of, record is there any suggestion to arrive at the claimed structure of the present invention.

None of the cited references singularly or in combination teach or obviate the presently claimed invention.

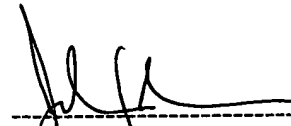
If any additional charges are required, please charge Deposit Account Number 07-1340. A

check for the two additional independent claims is attached.

It is respectfully requested that the arguments and amendments present in the present application in condition for favorable reexamination and that the application be passed to issue.

Respectfully submitted,

GIPPLE & HALE

A handwritten signature in black ink, appearing to read 'John S. Hale', is written over a horizontal dashed line.

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